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10/522,113	01/25/2005	Christophe Galopin	102790-123 (30053 US2)	1934
27380	7590	04/10/2008		
NORRIS, MCLAUGHLIN & MARCUS			EXAMINER	
875 THIRD AVE			DEES, NIKKI H	
18TH FLOOR				
NEW YORK, NY 10022			ART UNIT	PAPER NUMBER
			1794	
			MAIL DATE	DELIVERY MODE
			04/10/2008 PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/522,113

**Applicant(s)**

GALOPIN ET AL.

**Examiner**

Nikki H. Dees

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 25 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date See Continuation Sheet
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :25 January 2005, 14 March 2005 .

### 3DETAILED ACTION

#### ***Claim Rejections - 35 USC § 101***

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 5 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 5 provides for the use of the compound of claim 1, but, since the claim does not set forth any steps involved in the method/process, it is unclear what

Art Unit: 1794

method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

### ***Claim Rejections - 35 USC § 102***

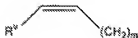
5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Gamboa-Leon et al. (Gamboa-Leon, R., Chilton, W.S. 2000. "Isobutylamide numbing agents of toothache grass, *Ctenium aromaticum*." Biochemical Systematics and Ecology. Vol. 28. pp. 1019-1021).

7. Gamboa-Leon et al. teach the compound N-(1-isobutyl)-2(E),4(E),8-decatrienamide (isoaffinin). This compound anticipates Applicant's claims 1 and 4 wherein R' is H, R''' and R'''' are methyl, n is 2, R'' is the group



with m=1 and R' is an ethyl radical.

8. Gamboa-Leon state that the chemical shifts for the double bond at C8 overlapped, precluding the assignment of cis-trans. As one of ordinary skill would at once be able to envisage the specific compound as claimed by applicant within the

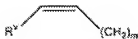
generic chemical formula as taught by Gamboa-Leon, this teaching is thus considered anticipatory of Applicant's claims 1 and 4.

***Claim Rejections - 35 USC § 102/103***

9. Claims 1, 3, and 5-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hatasa et al. (3,720,762) with evidence provided by Nakatani et al. (Nakatani, N., Nagashima, M. 1992. Pungent alkamides from *Spilanthes acmella* L. var. *oleracea* Clarke." Biosci. Biotech. Biochem. Vol. 56. pp. 759-762).

10. The '762 patent teaches the compound spilanthol in food products and personal care products. It may be used in combination with other flavors, or by itself (col. 1 lines 47-51). The amount of spilanthol to be added to compositions is taught to be from 0.01 to 5.00 wt % (col. 2 lines 35-37).

11. The structure of spilanthol is N-(1-isobutyl)-2(E),6(Z),8(E)-decatrienamide, as shown by Nakatani et al. (compound 1). This compound anticipates Applicant's claims 1 and 3 wherein R' is H, R''' and R'''' are methyl, n is 1, R'' is the group



with  $m=1$  and  $R''$  is an alkenyl radical.

12. The structure of spilanthol differs from applicants' claimed compound by the presence a trans-double bond at 8C instead of the cis-double bond as claimed by applicants. The teachings of the '762 patent as such anticipate Applicants' claims 1 and

Art Unit: 1794

3, or in the alternative, applicants' claims would have been obvious to one of ordinary skill at the time the invention was made. The structure and properties of the two compounds are closely related and as such could be clearly envisaged by one of ordinary skill in the art.

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gamboa-Leon et al. in view of Fox et al. (Fox, M.A., Whitesell, J. 1994. Organic Chemistry. Jones and Barlett Publishers. p. 79).

15. Gamboa-Leon et al. teach the isobutylamide N-(1-isobutyl)-2(E),4(E),8-decatrienamide as detailed above.

16. They are silent as to the compound containing an -OH group in the R' position.

17. Fox et al. teach that the substitution of an -OH for a -H of a hydrocarbon alters the boiling point and solubility of the compound.

18. The substitution of an -OH for an -H would be one that is readily apparent to one of ordinary skill in the art. As this change would alter the boiling point and water solubility of the compound, one of ordinary skill would make the substitution depending

Art Unit: 1794

on the final use of the compound. This change would be within the abilities of one of ordinary skill, and would not require undue experimentation. The resultant compound would be expected to have a slightly altered boiling point and water solubility, and thus be more suitable for particular applications

19. Claims 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gamboa-Leon et al. in view of Hatasa et al. (3,720,762).

20. Gamboa-Leon teach N-(1-isobutyl)-2(E),4(E),8-decatrienamide as detailed above. They further state that isobutylamides of unsaturated fatty acids occur widely in certain families of dicotyledonous plants and that isobutylamides are generally known to be pungent, numbing agents.

21. They are silent as to the use of isoaffinin in foods, beverages, or personal care products.

22. The '762 patent teaches spilanthol, another isobutylamide of an unsaturated fatty acid, in foods and oral care products including mouthwashes, gums, and breath fresheners. They further state that the spilanthol has a sharp flavor and a local anesthetic property. The spilanthol may be used alone or in combination with other flavorings (col. 1 lines 47-61). The amount of spilanthol used in the invention ranges from about 0.01 to 5.00 wt % (col. 2 lines 36-37).

23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used isoaffinin, an isobutyl amide of an unsaturated fatty acid, as taught by Gamboa-Leon et al. in the invention of the '762 patent. One of



Art Unit: 1794

ordinary skill would have had a reasonable expectation that the isoaffinin would have the same flavor and slight numbing properties as the spilanthal, another isobutylamide of an unsaturated fatty acid. Substitution of one compound for another would not require undue experimentation, and there would have been a reasonable expectation that the resultant foods, beverages and oral care products would maintain their favorable organoleptic properties.

### ***Conclusion***

24. The examiner would like to direct applicants' attention to US 7,141,686 B2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikki H. Dees whose telephone number is (571) 270-3435. The examiner can normally be reached on Monday-Friday 7:30-5:00 EST (first Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nikki H. Dees  
Examiner  
Art Unit 1794

/Carol Chaney/  
Supervisory Patent Examiner, Art Unit 1794